

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/019040

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> C10M101/04, 111/02//B23Q11/10, 11/12, (C10M111/02, 101:02, 101:04, 105:02, 105:32), C10N30:00, 30:06, 30:10, 40:02, 40:04, 40:08, 40:20, 50:04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> C10M101/00-101/04, 105/02-105-06, 105/32-105/48, 111/02, 127/00-127/06, 129/68-129/84, 129/95, 159/04, 159/08, 169/04, C10N30:00, 30:06, 30:10, 40:02-40:04, 40:08,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2005  
Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/30945 A1 (Nippon Mitsubishi Oil Corp.), 03 May, 2001 (03.05.01),	1-9
X	WO 01/88068 A1 (USINOR), 22 November, 2001 (22.11.01),	1-9
X	WO 02/00815 A2 (RENEWABLE LUBRICANTS, INC.), 03 January, 2002 (03.01.02),	1-9
X	JP 11-80764 A (Kyodo Yushi Co., Ltd.), 26 March, 1999 (26.03.99),	1-9
X	JP 8-311466 A (Fuji Oil Co., Ltd.), 26 November, 1996 (26.11.96),	1-9



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search  
24 March, 2005 (24.03.05)

Date of mailing of the international search report  
12 April, 2005 (12.04.05)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/JP2004/019040

WO 01/30945 A1	2001.05.03	CN 1337990 A JP 2001-192685 A JP 2001-192686 A JP 2001-192690 A JP 2001-192691 A KR 2001111486 A US 2002/0035043 A1
WO 01/88068 A1	2001.11.22	AU 200162413 A BR 200110908 A EP 1287097 A1 FR 2809116 A1 JP 2004-515564 A US 2004/0029749 A1
WO 02/00815 A2	2002.01.03	AU 200171565 A BR 200112081 A CN 1439045 A EP 1294833 A2 JP 2004-502023 A MX 2003000091 A US 6383992 B1
JP 11-80764 A	1999.03.26	(Family: none)
JP 8-311466 A	1996.11.26	DE 69605853 T2 EP 744455 A2 US 5688749 A

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10/584305  
AP3 Rec'd PCT/PTO 23 JUN 2006

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Continuation of B. FIELDS SEARCHED

Minimum documentation searched (International Patent Classification (IPC))

Int.Cl<sup>7</sup> 40:20-40:24, 50:04, B23Q11/10-11/12

Minimum documentation searched (classification system followed by  
classification symbols)

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